

**PETRONAS**  
Fluid Technology  
Soluti▶ns™

**INDUSTRIAL PRODUCT RANGE**



PETRONAS, short for PETROLIAM NASIONAL BERHAD, is a fully integrated Oil & Gas Multinational with operations spanning the Oil and Gas energy chain from exploration & production to refining and oil & gas marketing. PETRONAS is amongst top 10 petroleum companies in the world and is highly ranked amongst fortune global 500's largest corporations. PETRONAS was founded on 17<sup>th</sup> August 1974 as the national oil company of Malaysia.

It is one of the most successful nationally owned oil companies in the world.

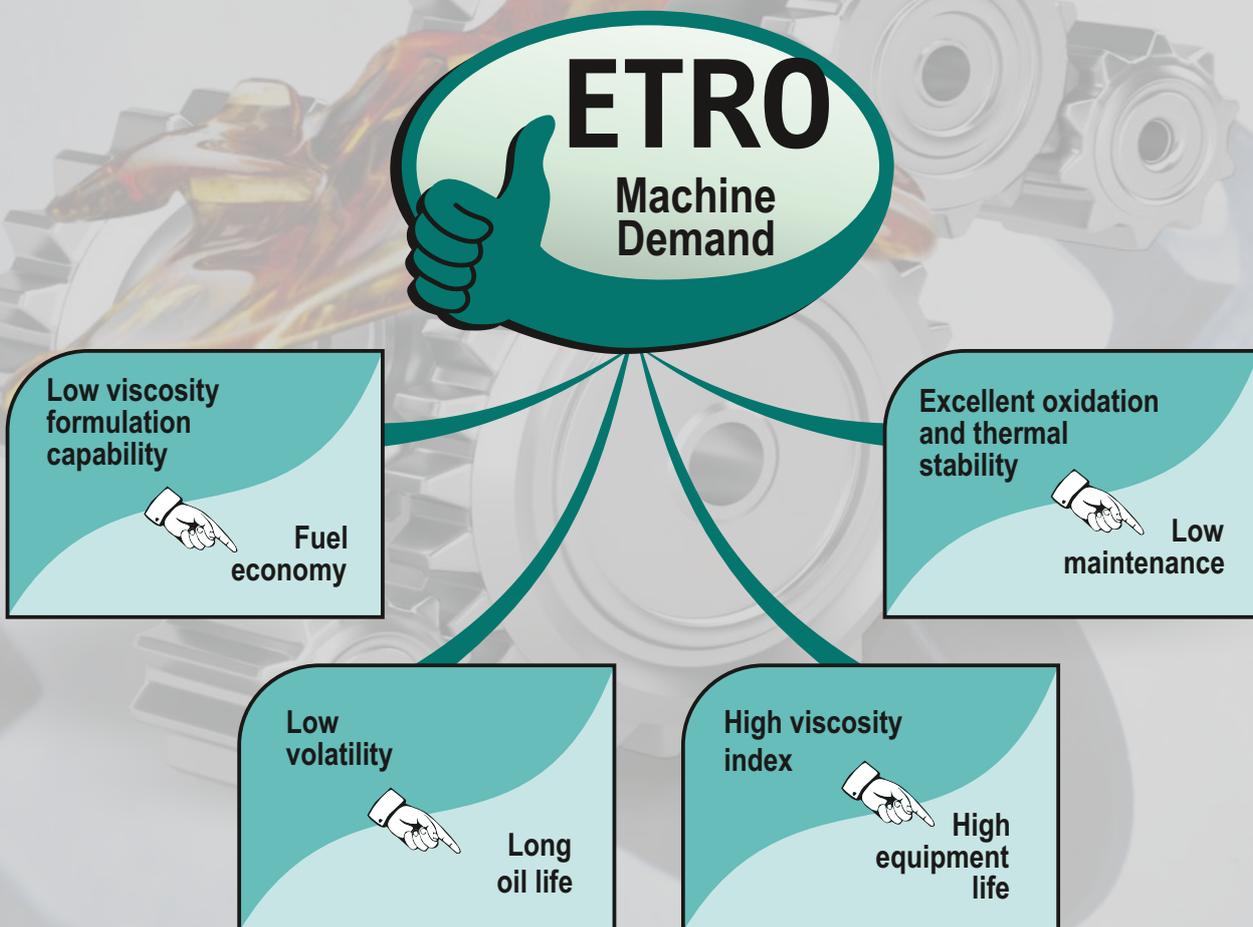
Global lubricant business of PETRONAS is managed by PETRONAS Lubricants International or PLI. PETRONAS has a wide range of lubricants specially created while maintaining the highest standards of the industry catering to market needs.

### WHY PETRONAS LUBRICANTS?

PETRONAS Lubricants uses its own API Group III+ base oil, ETRO, whose exceptional features are:



## - THE PETRONAS ADVANTAGE



# METAL WORKING FLUIDS

## Water Soluble Cutting Oils

### Mineral oil

**Logamol E 160** General purpose cutting fluid suitable for light to medium duty operations such as grinding, turning, milling, drilling, forming, etc. on ferrous and non-ferrous materials.

### Semi-synthetic

**Mecafluid/S 42 Plus** Semi-synthetic cutting fluid suitable for light to moderate duty machining operations on ferrous and non-ferrous materials.

**Mecafluid/S 80** Heavy duty semi -synthetic cutting fluid suitable for wide variety of operations from form grinding, turning to deep hole drilling and broaching on ferrous and non-ferrous materials.

### Synthetic

**Mecafluid/S 2006** Synthetic fluid for heavy duty machining of ferrous and non-ferrous materials or where very high degree of surface finish is required.

## Neat Cutting Oils

Application	Petronas Grade	cSt at 40°C	Compatibility	Recommendation
Gear hobbing	<b>Logamol EMG 40</b>	40	Ferrous	Suitable for gear hobbing, shaving, shaping, threading, drilling, boring, reaming and tapping. EMG 40 is a heavy duty product for tough operations.
Deep/hole drilling Broaching	<b>Logamol EVG 17</b>	17	Ferrous & non ferrous	Suitable for deep hole drilling, broaching, boring, reaming, tapping, milling, turning of ferrous material.

## Drawing & Forming Oils

Application	Petronas Grade	cSt at 40°C	Recommendation
Cold forging	<b>Logamol LF 1C</b>	80	Suitable for cold heading, progressive heading and cold nut forming. Not suitable for yellow metals like copper, brass and bronze.
Stamping	<b>Mecafluid/D 128FT</b>	100	Suitable for fine deep pressing of steel of thickness up to 12mm.

## Quenching Oils

Application	Petronas Grade	cSt at 40°C	Recommendation
Medium fast	<b>Logamol Quench MF</b>	22	Suitable for quenching of smaller components such as nuts, bolts, set crews, crank shafts, ball bearings, hand tools and springs.

## Rust Preventives

Type	Petronas Grade	cSt at 40°C	Indoor-storage	Outdoor-storage	Recommendation
Dewatering	Logamol ECT-L	2	2 month	1 month	Water wet components after cutting or aqueous wash.
	Logamol ECT 10	2	2 month	1 month	Water wet components after cutting or aqueous wash. Nuts, Bolts, Bearings, Bars, Tubes, Machine tools. EC 10S is a mild odour product which also has high flash point (90°).
Greasy	Logamol RG 20	3	5 month	4 month	Valuable machine & tools

## Cleaners

Application	Petronas Grade	Product Description
Water based	Mecaclean EXP	High pressure industrial cleaners, working at pressures up to 300 bar on all ferrous components, aluminum and aluminum alloys.

# MACHINERY LUBRICATION

## Hydraulic Oils

Hydraulic / Machinery oil - HLP	Hydrocer 32, 46, 68
Hydraulic oil - Premium quality HLP grade	Hydraulic 10, 32, 46, 68, 100, 150
	Hydraulic UF 46, 68
Hydraulic oil - High viscosity index (HVI)	Hidrobak HV 32, 46, 68
Hydraulic oil - HVI and Zinc/Ash free	Hidrobak HVZF 32, 46, 68
Slide way oil	Husoli HG/Slide Way 68, 220

## Gear Oils

Gear oil - EP type	Gear MEP IND 68, 100, 150, 220, 320, 460, 680, 1000
Synthetic gear oil - PAO based	Gear SYN PAO 150, 220, 320, 460
Synthetic gear oil - PAG based	Gear SYN PAG 150, 220, 320, 460

## Compressor Oil

Screw air compressor oil	Compressor Oil AM2/AM4
Synthetic screw air compressor oil	Compressor A SYN PAO, SYN PAO VG 46, 68, 100, 150
Refrigeration compressor oil	Pressol LTM 68

## Turbine Oil

Lubrication of steam, gas and hydraulic turbines	Jenteram G 32, 46, 68
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## Thermic Fluid

<b>Danol XHT 24</b>	Synthetic heat transfer oil, operating temperature upto 320°C. Thermic fluid for heat transfer system used in textile, pharmaceutical, chemical and process industries.
<b>HTO 32</b>	Mineral heat transfer oil, operating temperature upto 280°C.

## GEAR & TRANSMISSION OILS

### Transmission Oil

<b>Urania CF 10W (SAE 10W)</b>	API CF/SF, MB228.0, Allison C-3	Mono grade mineral based engine oil for heavy duty diesel engines.
<b>Tutela Transmission EPYX Series</b>	API GL-4 (SAE 90,140, 80W90)	Specific multi grade lubricant for manual gearboxes and differential with hypoid gears of all the types of motor vehicles where lubricants with Extreme Pressure (EP) characteristics are demanded.
<b>Tutela Transmission W90/M-DA</b>	API GL-5 (SAE 80W-90)	Axle fluid for any vehicle applications. It is suitable for differentials with hypoid gears and steering boxes where lubrication with Extreme Pressure (EP) characteristics is required
<b>Tutela Transmission W140/M-DA</b>	API GL-5 (SAE 85W-140)	Fluid for mechanical transmissions of cars, commercial vehicles, industrial vehicles, construction and suitable for use in gears and differentials with hypoid gears and steering boxes, wherever lubrication with EP is required.
<b>Tutela GI/A</b>	DEXRON II	Transmission oil for hydrodynamic, hydrostatic gear boxes of industrial vehicles, tractors, combines and agricultural machinery.
<b>Petronas ATF D III</b>	General Motors DEXRON IIIG Allison C-4	Use in all automatic transmissions, power steering and other hydraulic systems for which a DexronIII or AllisonC-4 type fluids are specified. It is also suitable for use in hydrostatic drive s and industrial, agricultural, mining and marine hydraulics systems.

### Universal Tractor Transmission Oil (UTTO)

<b>Akros Multi UTTO (SAE-10W-30, 20W-30) Wet Brakes</b>	API GL-4 CNH MAT 3509 John Deere JDM J20C	High performance fluids for use in transmissions, hydraulic systems, oil immersed brakes of tractors & off-road equipment, quarrying and used final drives and hydraulic systems and to optimize the performance of agricultural and commercial tractors.
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## DIESEL ENGINE OILS

<b>Urania Optimo SAE 10W-40</b>	API CI-4/ CF MB228.5, Man 3277, MACK EO-N	Extra high performance synthetic blend diesel engine oil exceeding MB 228.5 performance levels with outstanding soot control.
<b>Urania Supremo CJ-4 SAE 15W-40</b>	API CJ4 / CI 4 PLUS Cummins CES 20078, Volvo VDS-3, MB 228.3, MAN 3275, MACK EO-M Plus	Ultimate performance multi grade diesel engine oil for modern low-emission engines with outstanding soot control, exceeding API service CI-4 and ACEA E7 performance levels, low emission engines with exhaust gas recirculation (EGR).
<b>Urania Supremo CI-4 SAE 15W-40</b>	Cummins CES 20078, Volvo VDS-3, MB 228.3, MAN 3275, MACK EO-M Plus	Ultimate performance with outstanding soot control, multi grade diesel engine oil exceeding API service CI - 4 and ACEA E7 performance levels, low emission engines with exhaust gas recirculation (EGR) as well as older high speed turbo charged engine.
<b>Urania 1000 SAE 15W-40</b>	API CH4 / SJ Cummins CES 20076, Volvo VDS-2, MB 228.1, MAN 271, MACK EO-M Plus	Ultimate performance multi grade diesel engine oil exceeding API service CH-4 performance levels with extended oil drain intervals on low emission engines.
<b>Urania 3000 SAE 15W-40</b>	API Ci4 + / SJ Cummins CES 20076, Volvo VDS-2, MB 228.1, MAN 271, MACK EO-M Plus	Ultimate performance multi grade diesel engine oil exceeding API service CI-4 + high performance levels with extended oil drain intervals on low emission engines.

## GAS ENGINE OILS

<b>PETRONAS GEO NG</b>	Excellent TBN retention & excellent engine cleanliness with great oxidation and nitration stability. High anti-wear and rust protection. Specially developed for the lubrication of a wide range of spark-ignited gas-fueled engines in order to improve fuel efficiency and reduce emissions.
<b>PETRONAS GEO BLG</b>	Excellent TBN retention & excellent engine cleanliness. It is premium performance bio and landfill gas engine oil specially developed for bio and landfill applications. Excellent anti-wear and anti-scuff protection with high oxidation and nitration stability. High rust and corrosion protection.

## GREASES

<b>Tutela MR3</b>	Lithium soft & stringy texture	Special multi -purpose lithium grease for heavy commercial vehicle wheel hubbearing and lubrication of heavy commercial vehicles which does not require specific grease.
<b>Tutela Jota MP3</b>	Lithium multi-purpose	High viscosity index premium quality base for heavy or shock loading multi-purpose grease.
<b>Tutela Jota EP00, EP0, EP2</b>	Lithium extreme pressure	General multi-purpose EP grease for industrial applications, adhesiveness & resistance to water washout.
<b>Tutela Jota Ind Mo2</b>	Lithium (Moly grease, EP)	Multipurpose grease with MOS2 as EP additive to avoid shock load & noise, anti-scuffing, water resistance, longer life.
<b>Tutela Jota Com 2/LIX-2-170</b>	Li-Complex multipurpose EPgrease	Li-complex grease with EP for load carrying ability, rust- corrosion resistance, shear stability, lease oil separating, component life.
<b>Grease CASX</b>	Calcium Sulphonate component	Hightemp+180°C-low torque, long life, low bearing wear & corrosion, high load carrying ability, protection and good water resistance, for hot electric motor, fan & bearings mill.

## COOLANT

<b>Profar/ Profar Ready</b>	JIS K 2234, ASTM D3306	Areadytouse Ethylene Glycol based protective fluid for radiators, cooling systems of motor vehicle, light and heavy commercial vehicles, tractors and earth-moving machinery.
<b>Profar OT (Concentrate)</b>	JIS K 2234,ASTM D3306 / 4985/6210	It is a concentrated Ethylene Glycol protective fluid forradiators,cooling systems of car, light and heavy commercial vehicles, tractors & earth-moving machinery.



**PETRONAS**

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